

Mass Spectrometry KA7010KA/7011 Autumn 2018

Preliminary schedule 2018-10-10

Course meetings, all compulsory for KA7010, * compulsory for KA7011					
Mon	5/11	09.00-10.00	* Roll call, Introduction to the course	UN	B237
		10.00-	Lab safety and risk assessment of lab work 1-4	HG/EE/JG	B237
Tue	6/11	09.00- 12.00	* MS instrumentation, analyzers	UN	B237
Wed	7/11		* Homework		
Thu	8/11	09.00-12.00	* MS instrumentation, analyzers continued	UN	B237
		13.00-14.00	Exam on lab safety	EE/JG	B237
Fri	9/11	09.00-12.00	* MS instrumentation, analyzers continued	UN	B237
Mon	12/11	09.00-12.00	* Scan techniques and LC/MS: ESI, APCI, APPI	UN	B237
Tue	13/11		* Home work (Note:lab for Gr 2 and 4)		
Wed	14/11	09.00-12.00	* Continuation LC/MS techniques	UN	B237
Thu	15/11	09.00-12.00	* GC/MS EI, PICI, ECNI	UN	B237
Fri	16/11		* Homework (Note: lab for Gr 1 and 3)		
Mon	19/11	09.00-12.00	* Continuation of GC/MS techniques	UN	B237
Tue	20/11	09.00-12.00	* Quantitative MS/Choice of projects	UN	B237
Wed	21/11	09.00-12.00	* EI fragmentation and interpretation	UN	B237
Thu	22/11	09.00-12.00	* EI fragmentation and interpretation	UN	B237
Fri	23/11		* Literature studies for projects, groupwise		
Mon	26/11	09.00-12.00	* EI interpretation exercises	UN	B237
Tue	27/11		* Home work		
Wed	28/11	09.00-12.00	* Interpretation exercises	UN	B237
Thu	29/11	09.00-17.00	Project planning et c all day (lab Gr 2 and 3)		
Fri	30/11	09.00-12.00	Presentation of literat & risk assessm for projects	UN	B237
Mon	3/12	09.00-12.00	* MALDI, State-of-the-art-techniques	UN	B237
Tue	4/12	09.00-12.00	* CID fragmentation at LC/MS, peptide fragmentation	UN	B237
Wed	5/12	09.00-12.00	Project work until 12.00, then *homework		
Thu	6/12	09.00-12.00	* Biomolecular MS	UN	B237
Fri	7/12	09.00-1300	Project work		
Mon	10/12	09.00-12.00	Presentations of results from lab 1-4/peer review	UN/JG/EE	B237
Tue	11/12	09.00-12.00	* Interpretation and other MS exercises	UN	B237
Wed	12/12	09.00-12.00	* Interpretation and other MS exercises	UN	B237
Thu	13/12	09.00-17.00	Project work all day		
Fri	14/12	09.00-17.00	Project work all day		
Mon	17/12		Exam prep		
Tue	18/12	09.00-14.00	Exam		B237
Mon	7/1	09.00-17.00	Project work all day		
Tue	8/1	09.00-17.00	Project work all day		
Wed	9/1	09.00-17.00	Project work all day		
Thu	10/1	09.00-17.00	Project work all day		
Fri	11/1	09.00-17.00	Project work all day		
Mon	14/1	09.00-17.00	Project work/consultation report/report writing		
Tue	15/1	09.00-17.00	Project work/consultation report/report writing		
Wed	16/1	09.00	Deadline for report submission		
Thu	17/1		Preparation for project presentations		
Fri	18/1	09.00-14.00	Project presentations	UN/EE/JG	B237

* = Mandatory also for KA7011

LAB SCHEDULE

Lab groups 1-4, Project and demo groups A-D 4 students/group

			Lab 1	Lab 2	
			EE	JG	
Mon	12/11	13.00-17.00	2	4	
Tue	13/11	09.00-17.00	2	4	
Wed	14/11	13.00-17.00	1	3	
Thu	15/11	13.00-17.00	1	3	
Fri	16/11	09.00-13.00	3	1	
Mon	19/11	13.00-17.00	3	1	
Tue	20/11	13.00-17.00	4	2	
Wed	21/11	13.00-17.00	4	2	
Thu	22/11	13.00-17.00	Extra time for lab		
Fri	23/11	Literature studies, no labs			
			Lab 3	Lab 4	Projects A-D
Mon	26/11	13.00-17.00	1	4	Prepare project plan, risk assessment, et c. Prepare presentations. Risk assessment needs to be approved before project lab work!
Tue	27/11	Homework, no lab work			
Wed	28/11	13.00-17.00	2	1	
Thu	29/11	09.00-17.00	3	2	
Fri	30/11	13.00-17.00	4	3	
Mon	3/12	13.00-17.00			<div style="display: flex; align-items: center; justify-content: center;"> <div style="border-left: 1px solid black; height: 100px; margin-right: 10px;"></div> <div style="text-align: left;"> <p>Project lab work starts here</p> </div> </div>
Tue	4/12	13.00-17.00			
Wed	5/12	09.00-12.00	Rest of day homework		
Thu	6/12	13.00-17.00			
Fri	7/12	09.00-13.00			
Demos					
Mon	10/12	13.00-17.00			
Tue	11/12	13.00-17.00			
Wed	12/12	13.00-17.00			
Thu	13/12	09.00-17.00	A, B		
Fri	14/12	09.00-17.00	C, D		
Mon	17/12	Exam prep, no lab work			
Tue	18/12	Exam, no lab work			
Mon	7/1	09.00-17.00			<div style="display: flex; align-items: center; justify-content: center;"> <div style="border-left: 1px solid black; height: 100px; margin-right: 10px;"></div> <div style="text-align: left;"> <p>Project lab work</p> </div> </div>
Tue	8/1	09.00-17.00			
Wed	9/1	09.00-17.00			
Thu	10/1	09.00-17.00			
Fri	11/1	09.00-17.00			
Mon	14/1	09.00-17.00	Project work/consultation report/report writing		
Tue	15/1	09.00-17.00	Project work/consultation report/report writing		

Lab 1: Scan techniques with LC/MS triple-quad, microLC

Lab 2: Scan techniques with GC/MS, identification and quantification

Lab 3: ESI/MS, peptides and proteins, sequencing, QToF

Lab 4: LC/ESI-MS, MSn, ion pair chromatography, LTQ ion trap

Demos: MALDI/MS and ion mobility MS, Orbitrap MS